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The Textile Term *gammadia*

Maciej Szymaszek

This paper aims to investigate the origin of the term *gammadia* by determining the oldest examples of its use both in source texts and secondary literature.¹ For nearly four centuries this term was commonly applied to the various motifs on mantles of figures represented in art of the 1st millennium AD.² These right-angled and letter-like signs attracted the attention of several authors who were seeking to explain their possible symbolic meaning, but they did not pay attention to the correctness of the term adapted to name such motifs.³ This approach contributed to the terminological confusion and difficulties in understanding the issue at hand.

Dictionaries and travel guides

The semantic scope of the term *gammadia* was defined by the editors and authors of Latin dictionaries and travel guides in the 17th century. The definition of this term most likely appeared for the first time in 1663 in the lexicon *Vocabulista ecclesiastico*,⁴ a book which became very popular and was reprinted many times.⁵ According to this laconic and anonymous text, the term referred to a garment or chasuble which had woven signs in the shape of the Greek letter *gamma*.⁶ At roughly the same time, Benedetto Mellini gave a similar explanation mentioning the opinions of other

1. The present contribution is an adapted English version of my study published in Polish: Szymaszek 2013. The paper was supplemented with a catalogue of all passages of the *Liber Pontificalis* containing the term *gammadia*.

2. Among others: Ciampini 1690, 90-105; Sarnelli 1716, 41-43; Martigny 1865, 285; Wessel 1971, Ghilardi 2007.

3. On the state of research see: Szymaszek 2014, 21-37.

4. Forte 1663, 79. It is difficult to point the authorship of this term, as it does not appear in the earlier versions of the lexicon of Giovanni Bernardo Forte, printed for the first time in the year 1480.

5. Cf. Marazzini 1987; Gaburri 1994; Marazzini 2009, 37-53.

6. Forte 1663, 79: “gammadia, ae, & gammodium ij, veste, ò pianeta tessuta con figure del Γ γ lettera greca, non sò, se grande o piccola. Anastas. Biblioht.”.

people who recognized *gammadiae* as signs composed of four gammas forming a cross $\Gamma\Gamma$.⁷ A very similar definition and illustration were also included in the *Hierolexicon sive sacrum dictionarium* which was published in 1677.⁸ In all three texts the authors referred to Anastasius the Librarian as the origin of the term, more specifically to the Book of Pontiffs, *Liber Pontificalis*, whose authorship was once attributed to him.⁹

The Book of Pontiffs

The *Liber Pontificalis* (here abbreviated *LP*) is probably the only textual source in which the term *gammadia* appears.¹⁰ The term can most often be found in acc. pl. fem. as *gammadias*, rarely in abl. pl. fem. as *gammadiis*¹¹ or in acc. pl. fem. without gemination as *gamadias*.¹² It is present in the sections covering the lives of six popes over a narrow period of only 63 years. It is mentioned for the first time in the

description of the gifts of Pope Leo III (795-816)¹³, and for the last time in the biography of Pope Benedict III (855-858).¹⁴ In the text the term *gammadia* is mostly applied in conjunction with the names of various types of utilitarian textiles called *vestis*, *velum* and *tetravila*. It also appears in relation to the names of architectural elements such as columns and arches.

Gammadia on altar cloths (*vestes*)

In the *LP* the word *vestis* is one of the terms denoting altar cloths.¹⁵ Such pieces were described as made of silk or woven *de fundato*¹⁶ and had a purple, red or white colour. The number of *gammadia* occurring on each fabric is described in three segments of the text, in which four motifs of this type are listed.¹⁷ Moreover, techniques in which *gammadia* were produced are mentioned in the *LP*. They were woven with gold and silver thread or created by “golden stripes” (*chrisoclabas*). The other two terms which

7. This information was provided by Giovanni Ciampini who owned a copy of Mellini's guide and included a Latin translation of his text in: Ciampini 1690, 95: “At istae Gammadiae nihil aliud erant, quàm Crucium figurae ex quatuor Gammatis co(m)positae, videlicet $\Gamma\Gamma$ tam in profanis, quàm in sacris vestibus textae, ut etiam hodie in suis Casulis Graeci habent”. Cf. Guidobaldi & Angelelli 2010, 341-342.
8. Macro 1677, 285: “vestis sacra cum figuris in forma litterae graecae. Gamma Γ contexta, qua utebantur etiam Latini, ut in musiuīs, & antiquis Romae picturis conspicitur. (...) Igitur hoc vocabulum nedum vestem; sed etiam textile hisce characteribus angularibus formatu significat”. The lexicon was published after the Macro's death and it is not possible to state who wrote this entry.
9. The problem of attribution of the *LP* to Anastasius the Librarian was widely discussed in Arnaldi 1963 and 2000.
10. Fragments of the *LP* are taken from a critical edition of the source: Duchesne 1955 (abbreviated here as *LPDu*). On the historical value of *LP* and its reception in later periods, see among others: Leclercq 1930, 354-459; Geertman 1989; Bauer 2004, 27-38.
11. For instance: *LPDu*, 55: “in circuitu altaris vela rubea sirica IIII, cum gammadiis et cruce de quadrapulo”; *ibidem*, 122: “vestem de fundato I, habentem in medio crucem cum gammadiis et periclisin de blata, legentem de nomine domni Leonis quarti papae”.
12. *LPDu*, 9: “veste de stauraci cum cruce et gamadias, simul et paratrapetis suis, cum periclisin de chrisoclavo”; *ibidem*, 26: “arcum argenteum I cum gamadias suas”.
13. *LPDu*, 2: “velum alithinum rotatum, habentem periclisin in rotas cum aucellos et in medio cruce cum gammadias et IIII rotas de tyreo filopares”.
14. *LPDu*, 146: “veste de fundato I, habentem in medio crucem cum gammadias de quadrapulo”.
15. Cf. Braun 1924, 9-10. Other terms used as names of altar cloths in the early medieval period are discussed in: Speck 1966 and Bovini 1974, 77-81.
16. Interpretation of this term remain unclear: Szymaszek 2013, n. 17; cf. Petriaggi 1984, 44 (“trapunto d'oro a disegno della rete da Funda, 'rete da pesca'”); Martiniani-Reber 1999, 292 (“tissu de luxe [...]. Il peut aussi servir à décorer un textile, sans doute en application. On présume qu'il se composait principalement de fils d'or”); Ripoll 2005, 60 (“tejido de seda decorado con figuras tejidas, a modo de contorno u orla, siempre destinado a paramentos sacros”).
17. *LPDu*, 3: “vestem de blathin, habentem in medio crucem de chrisoclavo et tabulas chrisoclabas IIII, cum gemmis ornatas, atque gammadias in ipsa veste chrisoclabas IIII, cum periclisin de chrisoclavo”; *ibidem*, 96: “necnon et aliam vestem rubeam I, cum caballo albo habente alas, cum periclysi de chrysoclavo et gammadias IIII et crucem de chrysoclavo”; *ibidem*, 125: “vestem de fundato cum IIII gammadiis auro textis I”. No similar information can be found in other sections which may indicate that it was not necessary to specify the number of *gammadia*.

appear in this context - *de quadrapulo* and *de obtapulo* - remain unclear.¹⁸

The general descriptions in the *LP* are helpful to determine the location of the *gammadia* on the altar cloths. The author of the analysed section of the *LP* first mentions elements he considered to be the most important, such as a theme or a scene which was usually located in the centre of the cloth.¹⁹ The description then continues with other motifs that were placed away from the centre and concludes with information about the borders (*periclisin*, *lista*).²⁰ Keeping this schema in mind, it can be stated that the term *gammadia* predominantly occurs in the final part of the description, prior to information about the borders.

***Gammadia* on curtains (*vela*)**

Vela is the second type of fabric mentioned in relation to *gammadia*. Such curtains were usually donated in sets of four,²¹ and thanks to the descriptions in the *LP* it can be said that they were suspended, *inter alia*, around the altar. *Gammadia* were made *de obtapulo*, *de chrisoclavo* or *de tyreo*,²² an expression which may be associated with the colour of the fabric (purple?), the material with which they were made (silk?), or their place of manufacture (Tyre?).²³ Neither the number nor the location of *gammadia* on the curtains are defined in the

LP. The only exception is the section of text acknowledging that these motifs were placed *in circuitu*, denoting a location around the edges of the fabric.²⁴

Set of four curtains (*tetravila*) decorated with *gammadia*

The third term, *tetravila*, only appears in connection with *gammadia* in the life of Pope Leo III.²⁵ On the semantic and syntactic layers it refers to the four *vela* and specifies a set of curtains that surrounded the altar on all four sides. Both the material used to make *tetravila* and the way it was decorated correspond with information in the descriptions of the curtains. These were fabrics made of silk which were white, purple or red. *Gammadia* were executed *de chrisoclavo*, which can be translated as 'by the golden stripes'.

***Gammadia* as a name of curtain**

The term *gammadia* also occurs in the biographies of Leo III, Paschal I, and Benedict III in connection with architectural elements in churches, such as arches and columns.²⁶ Three passages explicitly confirm their location as in close proximity to the altar, probably in the construction of *ciborium* standing over altar.²⁷

18. For the discussion of both terms see: Szymaszek 2013, 127; cf. among others: Martiniani-Reber 1999, 292 ("Les chiffres huit et quatre peuvent indiquer un rapport d'armure ou énoncer les côtés d'une forme géométrique, octogonale ou carrée, composant les décors de ces tissus"); Saxer 1996-1997, 222 ("I *quadrapola* o *quadrapula* sono grandi pezze di stoffa ornate di graniture di oro o di seta ai quattro angoli").

19. The issue of figural representations on the fabrics described in the *LP* was discussed by several authors: De Waal 1888, Beissel 1894; Von Sydow 1912, 7-14; Croquison 1964; Phillips 1988; Andaloro 1976; Andaloro 2003.

20. On the relations between the terms *periclisin* and *lista* see: Wiener 1917, 255-258.

21. Among others: *LPDu*, 57-58: "Fecit vela alitina venerabilis pontifex pendentes in circuitu altaris IIII, habentes cruces et gammadias de fundato et quadrapulo"; *ibidem*, 128: "fecit in circuitu altaris beati Petri apostoli vela sirica de prasino IIII, habentia tabulas de chrysoclavo, cum effigie Salvatoris et apostolorum Petri ac Pauli, seu ipsius almifici praesulis, et in medio cruces et gammadias de chrysoclavo cum orbiculis, in quibus sunt imagines apostolorum mirae pulchritudinis decoratas, quae in diebus festis ad decorem ibidem suspenduntur".

22. *LPDu*, 75: "vela alba sirica IIII, unum habens undique tyreum et in medio crucem et gammadias de chrisoclavo, aliud de stauraci, habens in medio crucem de olovero et gammadias de tyreo".

23. Cf. Du Cange 1887, 221; Oikonomides 1986, 37; Delogu 1998.

24. *LPDu*, 79: "vela de fundato VI, habentes in circuitu gammadias de obtapulo".

25. *LPDu*, 26: "tetravila rubea alitina IIII, habentes cruces cum gammadias et in circuitu periclisin de tyreo"; *ibidem*, 30: "tetravila alba olosirica rosata, ex quibus unum habente in medio crucem de chrisoclavo et gammadias de chrisoclavo".

26. For instance, *LPDu*, 53: "(...) super quem constituit arcora II de argento et gammadias IIII qui simul pens. lib. LX"; *ibidem*, 146: "arcum cum duobus gammadiis ex argento purissimo, pens. insimul lib. XL".

27. *LPDu*, 3: "fecit et confessionem eiusdem altaris ex argento purissimo, pens. lib. CIII, uncias II; columnas argenteas VIII cum

Table 1. The use of the term *gammadia* in the *LP*

Donors	Type and number of textiles with <i>gammadia</i> -motifs mentioned <i>expressis verbis</i> in the <i>LP</i>			Number of <i>gammadia</i> -textiles in the <i>LP</i>	Quantity
	<i>Vestis</i>	<i>Velum</i>	<i>Tetravila</i>		
Leo III	2	1	5	4	12
Paschal I	-	8	-	8	16
Gregory IV	2	8	-	-	10
Sergius II	1	1	-	-	2
Leo IV	20	12	-	4	36
Benedict III	1	-	-	2	3
Total quantity	61			18	79

Relationships between architectural elements and *gammadia* are not expressed in the *LP*. It is therefore necessary to consider whether the author of the text used the term to name a pattern that appeared in the columns and arches, or an object with a specific decoration. A passage from the life of Paschal I, in which all of these terms occur, is helpful in answering this question.²⁸ Firstly, there are two columns mentioned, then an arch, and finally two *gammadia*. This may suggest that *gammadia* were seen as separate objects, not as integral part of the decoration of architectural elements.²⁹

Gammadia is thus used in close conjunction with the names of structural elements and partitions of *ci-boria*. Given the context, it is clear that there were places for the suspension of *vela* and *tetravila*. This conclusion is crucial, as it presents the word *gammadia* not only in relation to the motif on the fabric, but also with a curtain decorated in a certain way.

Popularity of *gammadia* among papal gifts

In order to interpret information concerning *gammadia*, it is helpful to compare the quantities and types of fabrics given by donors (tab. 1). On the one hand,

it can be observed that the decorative motifs called *gammadia* appear in the context of at least 61 textiles (30 *vela*, 26 *vestes* and five *tetravila*). On the other hand, *gammadia* is also used as a name for a curtain 18 times. This type of gift was most popular during the pontificate of Leo IV, who gave at least 32 *vestes* and *vela* with *gammadia* patterns to the churches, along with a further four curtains which were identified as *gammadia*. Summing up the data, the total number of fabrics listed in the *LP* which are decorated with and defined as *gammadia* could be at least 79. However, it is worth noting that these fabrics do not constitute a dominant part of the papal gifts and account for less than 4% of the total number of curtains and altar cloths donated by Leo III, Paschal I, Gregory IV, Sergius II and Leo IV.³⁰

Gammadia and *gammula*

The results of the analysis indicate that the term *gammadia* referred to a decoration on the altar cloths and curtains, but also that it was used as a term for certain fabrics hung around an altar. The decoration of these textiles probably featured signs constructed of two stripes that met at right angles. They could easily

gammadias II et arcora II, cum cruce argenteas V et gabathas XV, pens. simul libras CL"; *ibidem*, 17: "veste de stauraci super eum posuit; atque regularem ubi supra investitum ex argento purissimo fecit; et super ipsum regularem posuit arcum et gammadias ex argento, qui pens. simul lib. LXXX"; *ibidem*, 57: "ante vestibulum altaris regularem investitum ex lamminis argenteis et columnis duabus, ubi et posuit arcum I et gammadias II, pens simul. lib. C semis [sic!]".

28. *LP*Du, 57 (quoted in the previous footnote).

29. In one case, the reference to "cum gamadias suas" states that *gammadia* were associated with arches, cf. note 11.

30. Statistical information regarding textiles mentioned in the *LP* was provided in Delogu 1998, 124. The gifts of Pope Benedict III were not analysed by Delogu.



Fig. 1. Altar cloth with signs in a right-angled shape, central panel of the casket donated by Pope Paschal I (Thunø 2002, fig. 65).

be associated with the shape of the *gamma* letter and gave rise to the term which was seemingly invented by the author or the authors of papal biographies in the first half of the 9th century.

A similar term, *gammula*, can be found in a section of *LP* written more than 100 years prior to the part of the text featuring *gammadia*. It appears only once in the life of Pope Benedict II (684-685).³¹ Analogous to *gammadia*, the term is a name of an ornamental motif on a purple altar cloth (*coopertorium*). The context of

use and the similar root of both words may indicate the decoration of covers and curtains with the signs of the same shape.³²

Representations in art

These hypotheses are confirmed by iconographic and archaeological sources which include late antique and early medieval representations and fabrics.³³ An example of this is a casket donated by Pope Paschal I

31. Duchesne 1955, vol. 1, 363: “Similiter in ecclesia beate Mariae ad alium Martyres coopertorium porphyrum cum Croce et gammulas et clavos IIII auroclavos et al circuitu palergium de olosiricum pulcherrimum”.

32. It should also be noted that the similar understanding of the term *gammula* appears in the 14th century in Pietro Bohier’s comments to the *LP*: “Gamulas: Id est litteras; ad gamma, quod est littera” (Přerovský 1978, 259).

33. For the scope of this paper only some examples will be given. More extensive material is discussed in Szymaszek, *forthcoming*.



Fig. 2. White hanging with red decorations, Monastery of St. John in Müstair, Switzerland (Goll, Exner, Hirsch 2007, 198).



Fig. 3. Curtains in the intercolumnia of the so-called palace of Theodoric, Church of Sant'Apollinare Nuovo in Ravenna, Italy (© Maciej Szymaszek, 2007).

(817-824) which originated from the period in which the biographies of relevance for this work were edited (fig. 1).³⁴ The central panel depicts the scene of the communion of the Apostles; Christ stands behind the altar covered with a cloth on which a cross and four motifs are visible, each made of two strips joined at right angle. The number and location of these signs, as well as the way in which they were represented on the surface - clearly distinguished and with a different texture than the background fabric - corresponds to the descriptions in the *LP*.

Gold, purple and black signs in a right-angled shape can be seen on many altar cloths depicted in the representations of a variety of topics. They are dated to the period preceding the redaction of part of the papal biographies discussed here, or are contemporary to them, or later. Among others they appear on mosaics in churches of Ravenna, such as Sant'Apollinare Nuovo, San Vitale and Sant'Apollinare in Classe, but also on the diptych from the National Museum in Warsaw, and on the so-called Vatican dalmatic now kept at the Museo del Tesoro di San Pietro.³⁵

34. Grisar 1907, 129-135, fig. 34; Thunø 2002, 79-117, pl. III, figs. 65, 66, 67.

35. Szymaszek 2013, 132-133.



Fig. 4. Templon screen with suspended white hangings with right-angled marks, Small Metropolis in Athens, Greece (© Maciej Szymaszek, 2008).

In regard to curtains, the paintings at the monastery in Müstair in Switzerland dated to the second quarter of the 9th century are especially valuable. They represent a suspended white hanging with red decorations and most probably mimic fabrics used in the interiors of churches (fig. 2).³⁶ The cloth is enclosed on four sides with red marks in the shape of two strips at right angles. Such a distribution of motifs is in conformity with the *LP* in which *gammadia* occurred on *vela* along with crosses and circles.

Similar signs also appear in the earlier monuments,³⁷ for instance, on the mosaic in the church of Sant'Apollinare Nuovo in Ravenna which is dated to the 6th century. It represents the so-called palace of Theodoric with white curtains suspended in the intercolumnia of the façade (fig. 3).³⁸ Golden motifs in shape of “gamma” with gold squares placed between the arms of the signs can be found on hangings in the central passage of the palace.

36. Goll, Exner, Hirsch 2007, 108-109, 198.

37. Szymaszek 2013, 134.

38. Deichmann 1958, figs. 107, 108. The same motifs also appear on preserved textiles interpreted as altar cloths, table covers or hangings. For instance, on a fabric from Egypt dated to the 4th-5th century, two corners are occupied by colored right angled stripes (Turell Coll 2004, 146-148, fig. 1). Another example is dated to the period between the 6th and 9th century and is believed to be a curtain (Schrenk 2004, 114-116). There are two marks formed from two strips at right angles in the corners.

Conclusions

The aim of this study was to reveal the origins of the term *gammadia* through the source texts. This term was found exclusively in the *Liber Pontificalis* and only in the biographies of the popes from the end of the 8th to the middle of the 9th century. In this limited period the term was used both as a name of right-angled motifs placed in corners of altar covers and curtains and also as a name of a textile hanging with such decorations. As such, there is no support in the *LP* for the belief expressed in literature that the term *gammadia* was connected with motifs of other shapes, such as those widely recurring on mantles of figures in the 1st millennium AD.³⁹

The method of decorating curtains with right-angled decoration placed in the corners of the cloth persists to the present day. An example of this is the hangings photographed by the author in 2008 at the Small Metropolis in Athens (fig. 4). These bands correspond to the shape of the motifs appearing on textiles and representations dated back to the 1st millennium AD and to the description of *gammadia* in the analysed part of the *LP*.

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39. Cf. note 3; Szymaszek 2015; 2016. See also the catalogue with over 360 representations with the so-called *gammadia* in: Szymaszek 2014.

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